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Mock Trials Report

As stated in the reports, internal communication with the subcontracting institution and as seen by the large number of issues we encountered within our trial, the project conception of our subcontract had to be adapted massively. Since a number of core features necessary for the tasks mentioned in the offer of our tender were not available until August or even November 2018, these had to be adopted and had to be evaluated within a mock trial setup, described in the following. These mock trials had to be designed rather minimally themselves, due to the lack of maturity of the platform during our period of evaluation, and the results are sketched with the capabilities SlideWiki offered. These mock trials led to many insights that we compiled into our perception of the concepts the platform is based upon, which are detailed in this report, and which exemplify problematic decisions in the SlideWiki design process. Instead of addressing these one-by-one, and reporting how the different trials were adopted to be evaluated within this changed context, we chose to approach this from a discussion of conceptions and design choice for SlideWiki as a collaborative content platform. We decided that a reflection on the design and implementation of fundamental concepts of SlideWiki as a collaborative open courseware and content sharing platform, based on aspects mentioned in our tender and intermediary report, would be a more constructive approach to the issues at hand. As an evaluation of the operative consequences of the design decisions made, this would address the trials described in our offer, and draw a more holistic picture of our experiences and feedback on the SlideWiki platform.

The structure of this report is as follows: After this overview, we discuss the content concept chosen for the implementation of SlideWiki. This is predominantly focused on criticism of the ownership concept for content generated or imported to the platform. While this concept is highly author-centric, the authors are designed to be impersonal and to the largest extent represented by their content, as is shown in the discussion in the user concept. While for an open collaboration platform both of these concepts are problematic in themselves, their combination is ever more problematic, resulting in issues in the interaction between users, as discussed below. Where these design choices could be (at least to some extent) compensated through an appropriate group concept, the group concept implemented in the platform (in particular at the time of evaluation), did not account for these shortcomings. While not as important for the cohesion of collaborative tools as the other aspects mentioned, we also believe that the use of social media tools rounding off this discussion shows aspects in which an open and collaborative OCW platform could be enriched.

Finally, the discussion of these aspects is concluded by a summary, before more general conclusions are drawn.

SlideWiki Content Concept

As stated in the intermediary report, the SlideWiki platform is document-centric and heavily draws on the concepts of intellectual property and copyright. It doesn't support copyleft and open culture principles, despite enforcing users to "share" slides under the CC-SA. While for an open course ware platform this is problematic as it is by itself, paired with an author-centric approach to the hosted content, we view the chosen content concept as fundamentally flawed for a collaborative platform.

The author-centric approach shows itself predominantly by the SlideWiki content ownership concept. Within this, slides and decks are owned by single users and the creator can not only invite other users to collaborate, but can also to revoke such right at any time (see criticism on the group concept later on). This is further underscored by the lack of cooperation with other users, which require the creation of a group with the respective edit rights, inviting the issues elaborated on below.

As argued in the intermediary report, SlideWiki could not be used for the teaching as intended in our offer for the SlideWiki tender. Because of this, it was not used by the students for their presentations; thus trial S1 could not be addressed by the project team. The period of our structured evaluation of the search functionality (at the beginning of November 2018) fell together with the last release of the platform. While a preliminary evaluation showed some weaknesses in the search functionality, the release made this evaluation impossible, since content was neither found by searching for relevant keywords, author or tags.

This was mostly fixed in later versions (as of mid-december 2018), which was done in a phase of our project however, in which the structured evaluation was not possible with the available resources. Sample searches with tags still exhibited the issue of different tags having the same label, and it was infeasible to find the respective tag (since only the label is shown in the search). This seemed to stem from the introduction of new deck families with urls of the form ../deckfamily/[tag label]-[number]. If this issue truly stems from that can't however be gauged from our perspective, and is a design flaw that future reviews should take into account. Furthermore, when searching for users, the form of contribution the user made was not visible, obscuring the relationship of the user towards the content.

Since moreover no information about searched terms (and derived from them the respective topics and related concepts) of a given user could be retrieved, trial D2 could also not be executed.

For the generation and import of content, the project group chose the format of Playlists. This format, where existing decks would be bundled into a playlist, that is dominantly featured with a users content (and thus a large part of the representation of their profile), worked out quite well. This was however mostly due to the problems with decks, which carried over to deck-of-decks (due to their close link to decks). With frequent issues observed on deck-level, the overlying organizational unit would have exhibited numerous errors, and its consistency would have been very problematic, due to fixes and forks of the incorporated decks, and the problems connected with forking of decks.

Another reason for choosing playlists over deck-of-decks is the fact that decks are linked to the playlist, and the playlist can be retrieved through the deck (which is essential since playlists are not searchable).

To our knowledge, joining existing material in different languages (e.g. in different decks), was not possible (apart from manual joining via copying and pasting markup text in the 'add language version' within the target deck), making a comprehensive evaluation (G2) impossible.

SlideWiki User Concept

The representation of users, and by this the concept of users, within SlideWiki is very basic.

A SlideWiki user is characterized by personal data and their content. The personal data[1] includes:

- Their name (Firstname, Lastname and Display name)
- Their image
- Their email address
- Their organization
- Their biography
- Their country

1 Their display language, password and further login options are not counted as personal data.

Both in design (e.g. interface area devoted to it) and possibilities for interaction, the user is first and foremost characterized through content. As remarked on in the content concept however, several fundamental issues exist with the content concept; in particular its author and document centric nature. This not only carries over the issues, but with the flaws in the user concept itself, worsens them.

The personal data is (with the exception of their first and last name and their email address) publicly visible to anyone, even for people outside the platform. No selection about who can see what data can be made; this is particularly true for other users sharing a group with the user. Information is either available to everyone or not at all.

The importance the SlideWiki design puts on personal data and its usefulness for other users, can further be seen by its lack of function.

The use of personal information however is implemented inconsistently; the first and last name of a user is not shown in their profile page; it is however possible to use this information in the search field to see a list of users, indirectly linking this information to the users. This includes first name, last name, email address, organization, location and country of the users. While the location and organization is a welcoming feature in order to get in touch with other users from given subjects or local areas, the implicitness of this design choice is a little misleading.

Further data about users was hard to retrieve. With the introduction of the current SlideWiki version (that was introduced in November 2018, after the preliminary end of our trial, making systematic evaluation impossible), only rudimentary statistics, including content contribution, likes and views could be derived, making a thorough evaluation of trial E1 and D1 impossible. The lack of interaction capabilities, in particular discussions and evaluation with tests, make it very hard for a teacher to identify weaknesses of their students' performance and their content in particular.

Trial P2 was intended to investigate user profiles representation of the students, in particular with regards to the discussions they would engage in, as well as providing them with a place where they can present themselves and engage with one another in order to foster more participation and the trans-disciplinary nature of the course. Since presentation capabilities within a user profile are minimal (as stated above), and a user is represented through static, minimal data instead of their social interaction, deriving information about their participation and social interaction was impossible within this conception of the platform. The same goes for trial D1.

SlideWiki User Interaction Concept

User interaction is foreseen on a rather basic level on SlideWiki. While it could be argued that user interaction is addressed through collaborative editing on the level of content, interaction is limited to (rudimentary) discussion on deck level and the use of social media tools, as well as the presentation room capabilities.

Discussion of content is mainly limited to comments, which can be created and deleted, and refer to the content itself, or to previous comments. They are shown by their discursive threats (by comment reference), with comments on the same level being sorted anti-chronologically. While comments can be made on individual slides, these discourses are not very persistent, since even slight edits of slides lead to the deletion of all comments on these slides. For a discussion on the contents, in particular including suggestions on how the slide could be improved or made more comprehensible, this is not a very productive solution to open courseware, where a modification of content can be expected, and the discussion may have value beyond the point of editing.

An even more fundamental issue with this (as already raised in the intermediary report, as well as discussed in there), is how forking content is understood. Whereas in the open source community, a fork is understood as a fundamental schism that introduces two histories, communities and understandings of the content, in SlideWiki, this is merely understood as some soft copying of content. The link with the original content is still so strong that the comments of the slides are still connected: a new comment in the forked slide is also shown in the original deck and vice versa.

This is absolutely contrary to use of the fork concept in the open source community and may be very invasive to the discussion that take place in two separate communities. Additionally, the comments are not language-specific (independent of the language chosen for the presentation of the deck), potentially resulting in a lot of incomprehensible discussion contributions in multi-lingual decks.

Interaction between users is further complicated by the design of the notification system. Notifications are centered around interactions of created content. Notifications are further discussed below with the subscription social media tool.

While directed at deck creators and groups and using social media tools, statistics also form part of the interaction between users. These give a quantitative perspective on edits, likes and views of a deck, and can be viewed by any user, regardless of whether they are the creator or owner or unrelated to the content. These are visualized in an activity timeline and user activity by the number within a given time frame (or number per user for a given time). This design decision is problematic, since users might not know that their activities are published comparatively (and are not informed about this), and users can't opt out of this. A restriction of statistics would not be possible due to the creator- and content-centric concept of SlideWiki.

User interaction was provisioned to take the largest role in our subcontracted trials. Due to the problems mentioned above however, to our frustration, little interaction capabilities were offered by the platform, making many of our trials impossible or trivial. SlideWiki furthermore didn't offer tools for proper collaborative editing. Since it couldn't be used as intended within our trial, many of the user interaction capabilities were investigated in the mock trials for trials I1 and P1 (and others with their respective focus), with the latter one being intended to understand students' interaction with course material, their participation and usage statistics. Due to the missing provisions (see above), trial P1 could not be concluded as expected.

SlideWiki Group Concept

For the longest part of the evaluation period, groups in SlideWiki were modeled very rudimentary. While the November 2018 update for the stable version increased group functionality and transparency (while only in some aspects), the fundamental concept of a group as an unsocial set of static, content-centered users did not change. To us, it seems that groups are viewed solely as communities of read-access (better said: visibility-access) users.

This is exemplarily seen through the design of the 'further information' field of a group, which does not offer information about members, but instead the group-editable content and the group creator. The group tools are very minimal, and the member setting only shows the members of a group and allows to leave the group.

Group details show first the creator of a group, the description she provided and the total amount of members. A second click is necessary to find out about other members. Several other misleading issues exist that push the creator of a group in a kind of inexpedient leader position: Only the leader of a group can add or suspend members. The inability to share group management functions leads to asymmetric power balances, and a potentially large amount of administrative work for the creator, without a way to choose for group governance modes. This also includes group information that might be of interest to other group members, such as insights into the group’s statistics. Through this, the contributors of a group are at the creator's mercy, which might motivate group splits and fragmentation that should not be intended for an OCW platform. This also establishes a culture of supervision rather than an environment of sharing knowledge by collective contribution and collaboration. Group leaders have asymmetrical insight into views, edits and likes of all members (with no roles in the group allowing other members to derive these insights), while none of them is informed about the fact that their behaviour is displayed to the creator.

The group concept thus mirrors the owner-centric approach already taken with content. Instead of being a social collection of equals, the power relationship in groups is very asymmetrical, and the

group concept stems from a very possessive way to view social interaction, which doesn't allow for differentiated group management and the transfer of roles.

Interaction between users of groups is not provisioned, and no place to discuss group-internal problems exists. Instead of being a forum of common interests, groups do not achieve what they are characterized as in open courseware concepts and collaborative learning environments.

Groups further are the basis for the cooperation between users, allowing the assignments of comprehensive edit rights immediately. However, it is possible to assign edit rights on an individual deck level, which makes the necessity of groups (as a forum to assign edit rights and viewing shared content) debatable (since both aspects can be covered elsewhere), and only makes this access control more time-efficient, but less granular. This at least makes groups a rather fuzzy concept.

No tools for collaborative tasks, as well as coordination infrastructure (e.g. group-internal discussion capabilities) are offered. The user-centered focus of the group is also evident from the 'Shared Decks' list, which is not content-centered, but instead user-centered.

The lack of group functionalities and roles is further seen by the lack of functionality to share or transfer the administration of such a group to a different person or to transfer ownership of a collaboratively edited deck to that group. In line with the content concept, the group concept propagates the principle that the group supports the creator to improve her "intellectual property". Credits are collected somewhere in the history but since cooperative rights can be revoked by the creator, she is in the position to expropriate the collaborators.

The group concept thus missed the chance to compensate for (some of the) design choices made about the content and the user concept. Where it could have compensated for these with an appropriate group concept, it continued the design paradigms sketched above, and cemented them through asymmetrical power structures and the lack of collaborative concepts and differentiated group management.

SlideWiki Social Media Concept

The social media concept within the SlideWiki platform is chiefly limited to connecting to platforms using existing accounts. SlideWiki offers to share content via Twitter, LinkedIn and Google+, as well as embedding it in HTML pages. It further allows to sign in with an existing Google account or a Github account. In line with its user profile concept as asocial content creator and group concept as user-created content viewing set of users, interactions do not take place directly with users or with groups, but only on the level of content.

Tools that could be counted as social media include sharing, liking, subscribing and commenting, and potentially sources, questions and tags (latter two only on deck level). How these are implemented and why we think SlideWiki falls short of what it could have achieved with social media tools is discussed in the following for each of these tools.

Sharing

Sharing content in SlideWiki is understood as refering to the URL of the respective slide or deck within a post of the medium of choice – a prepared email, tweet, google+ statement, LinkedIn post or message or iFrame tag (with the latter one being the most detailed one). All of these sharing options refer to other social networks outside of SlideWiki. Including social media capabilities within the SlideWiki platform for the interaction of users (outside of the scope of content) was not done, and only linkage to external platforms was provided. A minor problem with the inclusion of social media dissemination of the material is that it counts the attempts at sharing, not the actual post of the material, and thus generally overestimates the sharing count of the material.

Liking

Liking is a tool to assess the popularity of a deck. Liking always refers to the entire deck, but can also be done on a slide level. Forked decks don't carry over the likes of the original deck, despite

featuring the same content. Thus, the concept of forking is implemented more thoroughly with liking, which we appreciate, but which is done inconsistently with regards to how comments are preserved for forked decks. Liking is furthermore solely used for deck statistics and is separated from the social actions it implies in other social networks, such as subscription (which is handled separately) or user targeting (liking is anonymous). The low granularity of liking (no liking on slide level, but allowing liking the deck on a slide level) doesn't allow much insight into what users of the content appreciate about the deck. With the low persistence of comments on slide level, this makes feedback on slides a difficult concept to use for the implemented courses.

Subscribing

Subscribing is a deck-wide function that can be invoked on a slide level. It creates notifications for activities (as shown in the activity feed) related to this deck, such as when users Add, Edit, Move, Comment, Reply, Download, Share, Like, Use, Attach, Fork, Delete, Joined or have Left a deck. Not all of these activities are related to subscribing to decks a user doesn't own, and the notifications observed for subscribing to decks of others were 'edits'. Since these notifications are slide specific, we don't see it as problematic to only be able to subscribe to an entire deck, although with heavy subscription behavior, this could result in a large number of irrelevant notifications.

Commenting

Commenting on decks and slides in SlideWiki was chosen as the major tool for the interaction between users (as the user profile is a non-interactive location and no direct messaging works, arguably the only one). SlideWiki allows for nested comments that are shown in anti-chronological order, with the most current one of a given level on top (within the nested threads). Comments on slides are handled differently than comments on decks: while in some cases comments were deleted once a slide was edited, in other cases it was preserved; this was not observed in decks, and there comments persist (without the option to moderate this). A major issue was observed with forked decks, which is addressed elsewhere.

Source

Less of a social media capability than good scientific and educational practice is the source functionality. This functionality lets users add sources to the lecture material (on a slide-to-slide basis), which gets compiled in the sources tab of the deck. Sources come with information on Type (Web Page, Web Document, Publication, Person and Plaintext), Title, URL, Authors, Year and Comment. While it is not possible to assign sources to single statements on the slides, attaching them to the slide, with the respective comment allows referring to singular statements in the slides.

Questions

Questions are multiple choice quizzes for a deck of slides. They come without interaction capabilities and learning statistics, and can not provide the instructor with feedback about student performance. They are thought entirely from the perspective of the student, and the only evaluative aspect is the alignment of their answers and the requested knowledge. SlideWiki also features an exam mode, where students answer the questions and get a score, that is proportional to the correct answers (no differentiation possible), without the teacher being able to see the score of the students (no notifications for this). In our opinion, this aspect could have informed student-teacher interaction, which is however not fostered by it.

Tags

Tags are labels that can be attached to decks that describe the content of the decks and foster filtering. Two major conceptual problems with tags were found however. Tags with the same label can be different entities, resulting in extra work for finding relevant decks to a given label. Thus,

'deck families' for a tag are created, such as #interdisciplinary, #interdisciplinary-1, etc. This seems to be not intended, and is certainly counter-productive.

Furthermore, some decks were not listed under the decks filtered by these tags, devaluing the filter function.

Summary of the SlideWiki Concepts Evaluation

As shown in this report, the project conception of our subcontract had to be adapted massively, and instead of using the platform as intended, we had to resort to using mock trials for its evaluation. While the specific issues, and how they materialized, need not be repeated for a conclusion of the summary of this mock trial report, this conclusion aims to condense the discussion of our perception of the appropriateness of the paradigms chosen for the platform for a collaborative open courseware and content sharing platform.

We perceived SlideWiki as an author-centric and document-centric platform that, despite its self-perception of being a collaborative platform, is based on the concepts of intellectual property and copyright. The lack of social interaction capabilities, differentiated group management and its focus on content, in summary its asocial design, fails to alleviate the associated problems and instead fosters them.

The centrality of content for the representation of users, which beyond the content is rather basic and inflexible, is only in line with this design.

The lack of differentiated capabilities for group management and user interaction makes it unsuited for collaborative editing, and its counter-intuitive (and inconsistent) forking concept, that has nothing to do with its meaning in the open source community, stands for a culture that is far from open and collaborative.

Its design of groups as unsocial set of static, content-centered users with (forced) asymmetric power relationships and no group governance modes, as well as its rudimentary and undifferentiated group management, is, in our opinion counter-productive for an OCW platform, and leads to a culture of supervision rather than an environment of sharing knowledge by collective contribution and collaboration. This is also due to the lack of tools for collaborative tasks, as well as coordination infrastructure.

This concept thus missed the chance to compensate for (some of the) design choices made about the content and the user concept, and continues and cements the questionable design paradigms noted above.

While the social media tools do not impede collaborative efforts, their outwards-orientation and lack of group-internal social media tools do not alleviate any of the issues sketched above.

In summary, it can be said that, while priding itself to be a collaborative platform and enforcing CC-BY-SA, SlideWiki is a document-centric, rather than socio-centric, platform. By characterizing users by their content and choosing this as the primary forum for user interaction, while simultaneously limiting it to content in a strict way, as well as viewing groups as a collection of content-access users that don't have any direct interaction, it violates a number of essential principles for achieving this.

Critical Appraisal

This document stated the experience of the ULEI subcontractor within the SlideWiki project, as specified by their tender, intermediary reports and discussions with the contracting partner. It sketches the (adapted) trials performed by the subcontracted partner, and discusses how their experience with the platform was perceived by them, both with the offered functionalities, as with the (to some degree implicit) concepts these were based upon.

As amply stated above, we observed a number of questionable design choices. While these were enough to convince us of certain decisions the development team took, we don't see how they couldn't be transformed to arrive at a platform that truly enables collaborative editing and open course ware. The technical immaturity of the platform gives us hope that the observed manifestations of these choices were not true to its spirit and design, and that fully implemented, some values of collaborative editing and content sharing might manifest itself.

As stated in the final report, all in all the ULEI project group thinks that the SlideWiki platform can be a very valuable educational resource that could truly transform education and the nature of sharing and creating knowledge together in a society, if used as a collaborative and sharing platform and OCW tool. However, with the current state, we are critical that the fundamental design decisions, as seen through the implementation of the platform our project group worked with, can implement this vision, and we believe that several fundamental concepts need to be rethought in this light.

For this, we urge the SlideWiki sustainability team to take these values seriously and to change the focus of the platform from a spirit of ownership, access-granting and asymmetrical power structures within content-administering, to one of common content and collaborative editing, with a focus on communication and discourse between empowered equals in functional roles.

A reorientation of these concepts would not only allow for good quality content to be developed much easier, but the platform would also teach values needed for a social, open and collaborative age. We believe that with the right conviction and ressources, SlideWiki could unlock this potential and drive the future of digital education towards this new age.